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Flight Operations

**USAF FLIGHT MANUALS PROGRAM
(FMP)**

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This instruction implements AFD 11-2, *Aircraft Rules and Procedures* and defines the USAF flight manual program (FMP). This instruction interfaces with AFD 10-9, *Lead Operating Command Weapon Systems Management*; AFD 21-3, *Technical Orders*; AFI 21-303, *Technical Orders*; and TOs 00-5-1, *AF Technical Order System*, 00-5-3, *Technical Manual Acquisition Procedures*, and 00-5-19, *Security Assistance Technical Order Program*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. This instruction applies to all major commands (MAJCOMs) Operations Directorates, Air Logistic Centers/ Product Center Single Managers and Technical Order Managers, unit level TO distribution activities, flight manual managers and flight crewmembers who manage, prepare, review, approve, distribute, or use flight manuals. This publication applies to the Air Force Reserve (AFRC) and the Air National Guard (ANG). MAJCOMs may supplement this instruction. MAJCOMS will

coordinate their supplement to this instruction with HQ AFMC/A3V. See paragraph 1.6. of this instruction for guidance on submitting comments and suggesting improvements to this publication. This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974. System of Records Notice F011 AF XO A, Aviation Resource Management System (ARMS) covers required information. The authority for maintenance of ARMS is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), and Executive Order 9397 as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at: <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

(433AW) This supplement implements and extends the guidance of Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations* and Air Force Instruction (AFI) 11-215, *USAF Flight Manuals Program (FMP)*. It provides guidance and procedures that define and implement specific procedures and policies applicable to all aircrew members assigned and attached to the 433D Airlift Wing (AW). Unless otherwise specified, 433 Operations Group Commander (OG/CC) is the waiver authority for this supplement. Submit suggested improvements or changes and waiver requests through Standardization/Evaluation (Stan/Eval) channels to 433D Operations Group Standardization and Evaluation (433 OG/OGV), 215 Galaxy Rd, Ste 1, Joint Base San Antonio-Lackland, TX 78236-0106. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

(433AW) This is the initial publication of 433 AW Supplement to AFI 11-215.

SUMMARY OF CHANGES

This interim change removes the restriction for local supplements and corrects the Privacy Act information (Opening paragraph), corrected the date for the AF Form 847 (1.1) adds waiver guidance for flight manuals (1.4.2.), clarifies the inability of using Flight Crew Information Files (FCIF) to make changes to flight manuals (2.3.2.), changes the Flight Manual Executive Steering Group membership from AF Space Command to AF Global Strike Command (3.5.), corrects the office symbol of weapons manuals (5.2.22.), deletes the notification for Flight Manual Review Conferences to the ASC/AAA office (5.3.2.2.), changes the flight manual publication distribution method from the Automated Message Handling System to a Workflow email account (6.3.1.), and eliminates the requirement to train maintenance personnel on system and engine operation with the flight manual (6.3.5.), corrects the office symbol of weapons manuals

(6.4.1.9.), corrected the date for the AF Form 847 (11.3.3.1.). A margin bar indicates newly revised material.

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Chapter 1

GENERAL INFORMATION

1.1. General. HQ AFMC/A3 is appointed the executive agent for flight manuals and is responsible for program management, guidance, policy and procedures. This instruction establishes procedures and standards for personnel to manage and use USAF flight manuals to operate or maintain aircraft. It includes information for the use of Air Force Form 847, *Recommendation for Change of Publication*, 22 Sep 09.

1.2. Applicability. This AFI applies to all MAJCOMs (and subordinate levels), Direct Reporting Units (DRUs), Field Operating Agencies (FOAs), Air Logistics Centers (ALC)/Product Centers (PC), Program Managers (PMs), System Program Directors (SPDs), flight manual managers (FMMs), commanders and flight crewmembers who manage, prepare, review, approve, distribute or use flight manuals. This publication applies to Air Force Reserve Command (AFRC) Units. For the purpose of this instruction, the NGB functions similar to a MAJCOM.

1.3. Scientific and Technical Information (STINFO) Distribution Limitations and Distribution Statements. Publish, distribute and use all flight manuals and AF Forms 847 relating to flight manuals IAW DOD policy and AFI 61-204, *Disseminating Scientific and Technical Information* and 00-5-series Technical Orders.

1.4. Deviations and Waivers. Do not deviate from the policies and guidance in this AFI unless necessary to prevent personnel injury or weapon system damage or the situation requires immediate attention.

1.4.1. The flight manual always takes precedence over other sources containing conflicting data. Report all deviations or exceptions through the responsible MAJCOM standardization/Evaluation (Stan/Eval) function.

1.4.2. Waiver authority for the content of this instruction is HQ AFMC/A3, submit wavier on AFMC Form 73 or eSSS. Requests for deviations or waivers to specific Flight Manuals (TOs) shall be submitted through the responsible MAJCOM Standardization/Evaluation (Stan/Eval) function to the operating MAJCOM/A3 for approval. Waivers are intended to be of temporary nature and will be for specific, case-by-case instances; they will have specific beginning and ending dates. MAJCOM/A3s will consider waiver necessity for mission accomplishment, risk mitigation, as well as coordinate with appropriate aircraft program office engineering for concurrence. MAJCOM/A3s may delegate the waiver approval authority no lower than test Wing Commanders for deviations or waivers that are necessary and part of an approved Operational Test (OT) or Developmental Test (DT) Plan. MAJCOM/A3s will forward an information copy of all approved waivers to HQ AFMC/A3V.

1.5. Supplements. This instruction is a basic directive. MAJCOMs, FOAs, DRUs or operational theater commanders may supplement this instruction according to AFD 11-2, *Aircraft Rules and Procedures*. Limit supplement information to unique MAJCOM or Mission Design Series (MDS) requirements.

1.5.1. Coordination Process. Forward an electronic copy of MAJCOM approved supplements for coordination to HQ AFMC/A3V. If electronic media is not available, mail a copy to HQ AFMC/A3V, 508 W. Choctawhatchee Ave. Suite 4, Eglin AFB, FL 32542-5713.

1.6. Improvement Recommendations. Recommendations for improvements to this instruction will be submitted on AF Form 847, or future ETIMS electronic process, through channels, to the parent MAJCOM Stan/Eval. Parent MAJCOM Stan/Eval will forward approved recommendations to HQ AFMC/A3V, 508 W. Choctawhatchee Ave. Suite 4, Eglin AFB, FL 32542-5713.

Chapter 2

FLIGHT MANUAL PROGRAM (FMP) PUBLICATIONS

2.1. General. The following manuals are governed by this instruction: Basic Flight Manuals (-1 series), Air Refueling Procedures (1-1C-1 series), Basic Weight Checklist and Loading Data (-5 series), Functional Check Flight (-6CF series), Cargo Aircraft Loading Manuals (-9 series), Cargo Aircraft Nuclear Weapon Loading (-16 series), Nuclear Weapon Delivery (-25 through -31 series), Non-nuclear Munitions Delivery (-34 series) and Mission Operation (-43 series).

2.1.1. NATO Allied Tactical Publication, ATP-56(B), *Air-To-Air Refueling*, has become the primary source to provide aircrew with internationally standardized definitions, abbreviations and procedures to enable successful and safe Air-to-Air Refueling AAR operations. For aircraft with an in-flight refueling capability, the relevant TO-1 series provides supplemental MDS specific information on AAR orbit and rendezvous and procedures concerning tanker/receiver formations. ATP 56(B) can be found at <http://www.raf.mod.uk/downloads/airtoair56b.cfm>.

2.1.2. ATP-56(B) offers information pertinent to refueling with boom, probe and drogue equipped HC/MC-130, KC-135, KC-10 and KC-45 aircraft. The appropriate tanker National Annex provides information crucial to successful AAR from allied tankers.

2.2. Responsibilities.

2.2.1. PMs/SPDs of military aircraft acquisition programs will:

2.2.1.1. Establish a FMP when setting up a TO Management Agency (see TO 00-5-1). This responsibility extends for the life of the system and includes complete flight manual coordination responsibility across the AF system.

2.2.1.2. Appoint a qualified (see [paragraph 5.1.1](#)). FMM to manage the FMP for the life of the aircraft program. This includes initial acquisition and verification, maintenance and periodic reviews.

2.2.1.3. Establish procedures to ensure FMP records are maintained for the life of the program. Records include: applicable source data, certification documents, verification records, waiver documents, change requests, FMRC minutes and Deficiency Reports that affect the flight manuals. When two qualified FMMs are assigned, one at the Product Center (PC) during acquisition and one at the Air Logistics Center (ALC) for life cycle management under the Capabilities-Based delivery and sustainment concept, establish procedures to ensure FMP direction is coordinated and FMP records are maintained.

2.2.1.4. Ensure flight manuals for which the PM is responsible are addressed in the MDS/weapon system-specific Comprehensive Air Force Technical Order Plan (CAFTOP) annex. Use CAFTOP data to report flight manual currency metric on a quarterly basis.

2.2.1.5. Ensure flight test programs contain adequate instructions to gather data for flight manuals. See MIL-DTL-7700G, *Detail Specification, Flight Manuals, Air Refueling Procedures, and Abbreviated Checklists* for requirements.

2.2.1.6. Ensure all program elements (engineering, logistics, funding, etc.) support the FMP and its schedule ([Attachment 4](#))

2.2.1.7. Ensure that all technical order management and support activities adhere strictly to the 00-5 series technical orders and the AF Technical Order System. Ensure that all FMP acquisitions are verified and certified in accordance with TO 00-5-3 and AFI 63-104, *The SEEK EAGLE Program*, for acquisitions involving aircraft-store compatibility.

2.3. FMP Publications.

2.3.1. The minimum print quality for all FMP publications is Level III (Good Quality), as described in GPO Publication 310.1, *Quality Assurance Through Attributes Program For Printing and Binding*. These products require above average materials, printing, workmanship, quality control and commensurate production time. Products of this level require clean, sharp printing of single or multi-color work (general process color work) and halftone reproductions up to 150-line screen. Above average quality of the original copy, films, composition, reproduction proofs and typography standards are required to ensure the accuracy, durability and appearance of the finished printed product.

2.3.2. Only the FMM (ALC or PC assigned) may change, add, delete, and rearrange procedures or information in assigned FMP publications, preliminary FMP publications, operational and safety supplements, TO/Preliminary TO change(s) and revisions as specified in TOs 00-5-1 and 00-5-3. This authority cannot be delegated to the MAJCOM level or the MDS engineer. The MDS FMM and MDS primary engineer will ensure an established process is in place which verifies accuracy of FMP publication engineering content to support weapon system/lead MAJCOM requirements. This process will include a quality review of FM content by the lead MAJCOM or its delegate. The MDS FMM must approve all MDS FM changes. Flight Crew Information Files (FCIF) are not an authorized means of directing changes to flight manual guidance.

2.3.3. A change or revision is the preferred method for updating flight manual publications. However, if a formal supplement is the most expeditious and logical way to provide critical information to the field, FMMs may issue the formal supplement(s) with the concurrence of the lead and using commands. Hold supplemental write-in changes to an absolute minimum. Incorporate, supersede or rescind supplements as soon as practical, but not later than one year from date of issue. If the lead MAJCOM and FMM deem that a supplement should remain past the one-year time limit, notify HQ AFMC/A3V and USAF/A4MM 30 days prior to expiration.

2.3.4. Only use a supplement to update the basic publication. Do not use supplements to update information or procedures in a previous supplement.

2.3.5. Formal supplements affecting procedural checklists will contain temporary checklist pages.

2.3.6. Interim supplements affecting flight crew checklists will authorize write-in changes to the affected checklist. If practical, temporary checklist pages (cut out) may be provided as an attachment to the interim supplement.

2.3.7. The FMM will coordinate with lead MAJCOM before deciding whether to formalize an interim supplement. Replace interim supplements affecting flight crew checklists with

formal supplements containing temporary checklist pages. Publish a formal supplement or change and complete initial distribution (ID) within 40 calendar days after dispatch of the interim supplement. That decision may depend on whether a formal change is near the publishing stage of development.

2.3.8. For supplements affecting scroll checklists, maintenance or aircrew will make write-in changes on scroll checklists prior to use as directed by the supplement.

2.3.9. All FMP interim or formal supplements will include a status page or a paragraph listing all current supplements outstanding against affected manual and checklist.

2.3.10. If crews use the flight manual as their primary procedural source (instead of abbreviated checklist) while the aircraft is in flight, the Emergency Procedures (EP) section will only be updated using a formal change, unless the interim or formal supplement provides replacement pages (i.e., no write-in changes for the EP section under these circumstances). Temporary replacement pages are permissible. The time to publish the change will be the same as a formal supplement.

2.3.11. Unless authorized by the MAJCOM with approval from the FMM or in MDS-specific AFI, do not integrate/combine checklists derived from different flight manuals to form single checklists.

2.3.11.1. Unit developed checklists (e.g., fanfold, local checklists, etc.), to include performance data inserts, will not be used in lieu of flight crew checklists unless authorized in the AFI 11-2 MDS-specific volumes and approved by MAJCOM Stan/Eval and MDS FMM. When approved, as a minimum, these checklists will contain all items (verbatim and in order, unless specifically addressed in the basic flight manual) listed in the applicable checklists. These checklists will reflect the same change number, change date and applicable supplement numbers as the flight crew checklist for configuration control.

2.3.11.2. MAJCOMs may authorize crewmembers not to carry specific sections of aircraft, weapons or refueling manuals and flight crew checklists that do not apply to unit MDS weapons systems or equipment. Crewmembers will maintain these sections as directed by MAJCOM Stan/Eval.

2.3.11.3. MAJCOMs may add more restrictive items to flight crew checklists to enhance training, tactical operations or for special operations with the concurrence of the FMM. Send copies of these items to the FMM and review at the next Flight Manual Review Conference (FMRC) for inclusion in FM.

2.3.12. MAJCOMs may authorize units to withhold supplements that do not apply to the aircraft they operate. If MAJCOMs use this authorization it will be identified in MAJCOM supplement to this instruction.

2.4. Scroll Checklists. FMMs may develop and issue paper scroll checklists using official TO revisions or supplements to help complement the basic and functional check flight manuals.

2.5. Supplemental Flight Manuals:

2.5.1. FMMs will develop classified flight manuals and checklists according to MIL-DTL-7700G.

2.5.2. FMMs will develop supplemental flight manuals and checklists for aircraft modifications intended to be permanent according to MIL-DTL-7700G. These manuals and checklists complement the basic flight manual and are incomplete without it. The source data and preliminary technical data (PTO) for these manuals will be verified in accordance with TO 00-5-3 and where appropriate will be certified in accordance with AFI 63-104 for acquisitions involving aircraft-store compatibility.

2.5.3. As part of the formal flight test plan, MAJCOMs may develop interim modification flight manuals (MFMs) and checklists outside the formal TO development system.

2.5.3.1. These manuals and checklists provide operating instructions and information for a small number of aircraft modified for engineering and flight testing.

2.5.3.2. Only information and procedures resulting from the modification need to be included in the MFM since a standard flight manual is required for the aircraft. Data from the standard flight manual will be included in the MFM only to the extent required for clarity and understanding.

2.5.3.3. MAJCOMs that conduct formal flight testing will establish procedures for developing these manuals.

2.5.3.4. The information, data, and procedures in these manuals and checklists will be verified by the flight test crews in accordance with TO 00-5-3.

2.6. Commercial Aircraft Flight Manuals. Commercial aircraft (which have been certified by the Federal Aviation Administration (FAA)) and are procured (to included leased or bailed aircraft) by the USAF may utilize manufacturer provided flight manuals, including checklists, provided the provisions of Department of Defense (DOD) MIL-PRF-32216, *Evaluation of Commercial Off-The-Shelf (COTS) Manuals and Preparation of Supplemental Data*, have been met. The provisions of this instruction apply to COTS operated aircraft.

2.7. Joint Flight Manuals.

2.7.1. AFJI 21-301, *Inter-servicing of Technical Manuals and Related Technology*, prescribes the policies, agreements, and procedures for exchanging Technical Manuals and associated information on common-use equipment by military services and the Defense Logistics Agencies, (components). In development of new weapons systems, the PM will coordinate with the Lead MAJCOM/CC to determine if the provisions of a Joint Flight Manual meet the mission requirements for his aircrew (see [paragraph 6.4.1.12](#) for lead MAJCOM responsibilities for Joint Flight Manual coordination).

Chapter 3

FLIGHT MANUALS EXECUTIVE STEERING GROUP (FMESG)

3.1. General. The FMESG is a working level group that reviews and approves all Air Force policy and guidance relating to the FMP. Additionally, the Group reviews MAJCOM requirements, management objectives, FMP specifications, and timeliness of FMP publications, problem areas and FMP plans.

3.2. USAF Flight Manual Program Manager (FMPM). The USAF FMPM is appointed by HQ AFMC/A3. The USAF FMPM acts on behalf of the Air Staff through the AFMC/A3 to meet all AF FM requirements, management objectives, instructions and chairs the FMESG and represents the FMESG at the Centralized Technical Order Management (CTOM) Committee.

3.3. MAJCOM Flight Manual Program Managers. The MFMPM is appointed by the MAJCOM/A3. The MFMPM is responsible for guiding MAJCOM policy relating to MAJCOM weapon system FMs. This includes overseeing MAJCOM FM requirements, managing the change request processes at the MAJCOM, ensuring FM review processes are established in conjunction with the FMM, and identifying problem areas to the FMMs. MFMPM will also guide future FM strategies (including digital FMs) for weapon systems and ensure their inclusion in the MAJCOMs CAFTOP.

3.4. Meetings. The FMESG will meet annually (as determined by the USAF FMPM) or as deemed necessary by its members.

3.5. Membership. Members of the FMESG include the Lead Weapon System FMM, MAJCOM Flight Manual Program Managers (MAJCOM Representative), and DRU and FOA representatives from:

HQ ACC
HQ AMC
HQ AFMC
HQ AFSOC
HQ AETC
HQ AFGSC
NGB
HQ AFRC
34 OG (USAF)

3.5.1. Representatives from the ALC/PC will be the Lead Weapon System FMM from the Weapon System Program Office.

3.5.2. Representatives from each MAJCOM will be the MFMPM. DRU or FOA representation will normally be from the Stan/Eval function under the A3.

3.5.3. Other activities may participate as required in the FMESG on a non-voting basis to address specific issues.

3.6. Voting. FMESG decisions are made using a majority voting system, with one vote per MAJCOM and the lead weapon system FMM. Voting is limited to those MAJCOMs or weapon system FMMs that are affected by the issue being voted upon. All members may vote for issues,

which affect all MAJCOMs and weapon systems. The FMPM together with the lead MAJCOM for the affected weapon system or lead weapon system FMM will resolve split decisions (if required).

3.7. Action Items. Any individual or agency that develops, acquires or uses flight manuals may submit suggested action items through the parent MAJCOM FMESG representative (MFMPM). Suggested action items include a statement of the problem or initiative, the suggested corrective action or approach, previous action taken by the initiator to correct the problem, and the initiator's name/unit of assignment. The group representative will validate the action item, provide any previous actions to correct the situation, determine resources available to work the problem and note any anticipated benefits, costs and effects of other TO system users. The parent MAJCOM FMESG representative will submit the action items to AFMC/A3V who will present the issue to the next CTOM. MAJCOM FMESG members will ensure their MAJCOM CTOM representatives are aware of the proposed action item prior to the next CTOM. MAJCOM CTOM representatives are listed at the Air Force CTOM website, <https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=OO-EN-TO-PI>. CTOM organizational membership is listed in AFI 21-303, *Technical Orders*.

Chapter 4

HQ AFMC RESPONSIBILITIES

4.1. HQ AFMC/A3:

- 4.1.1. Appoint the USAF Flight Manuals Program Manager.
- 4.1.2. Provide operational senior officer oversight to the FMP. Receives updates and reports from the FMPM as required.

4.2. HQ AFMC/A3V:

- 4.2.1. Together with the FMESG, develop and implement policy and guidance for the Air Force FMP and coordinate policies affecting TO System policies with the CTOM and HQ USAF/A4MM.
- 4.2.2. Coordinate approval or disapproval of MAJCOM requests for waivers or exceptions to this instruction.
- 4.2.3. Coordinate FMP management with the DoD and other federal agencies.
- 4.2.4. Act as arbitrator and approving official for unresolved FMP issues.
- 4.2.5. Maintain a single source Internet accessible web page for all flight manual issues. This page is labeled the USAF Flight Manuals CoP at: <https://afkm.wpafb.af.mil/ASPs/CoP/EntryCoP.asp?Filter=OO-EN-MC-FM>. The Flight Manuals CoP will contain the following:
 - 4.2.5.1. Current listing of FMMs (by MDS) on the USAF FM CoP. This will include the name, weapon system, office symbol, address, and DSN number for each FMM.
 - 4.2.5.2. Current listing of all MAJCOM Flight Manual Program Managers to include e-mail, DSN, and office symbol.
- 4.2.6. Establish approval and control procedures for flight manuals and checklists for experimental, engineering, flight test and special mission aircraft (see [paragraph 2.5.3](#)) as referenced in AFMCI 21-126, *Temporary 2 (T-2) Modification of Aerospace Vehicles*.
- 4.2.7. Identify specialized engineering and technical support centers for the FMMs.

Chapter 5

AIR LOGISTIC CENTER (ALC)/PRODUCT CENTER (PC) RESPONSIBILITIES

5.1. PMs/SPDs and Technical Order Managers will:

5.1.1. Appoint individual FMMs who are technically qualified i.e. certified engineers, flight crew members, (with experience in the weapon system) or personnel with military aircrew experience using flight manuals (reference [paragraph 2.1](#)) and/or experience as an FMM. It is highly desirable that the chief of the FMM organizational element (or the next higher level organizational element) assigned engineering responsibility for FMMs have military aircrew experience or an aeronautical engineering degree, or have experience as an FMM.

5.1.2. Notify HQ AFMC/A3V when there is a change in FMM, the assigned aircraft changes or if FMM identification data changes with name, grade or rank, office symbol, DSN and commercial phone numbers, e-mail address, FAX number, aircraft MDS, and assigned TO number(s) and/or series as applicable.

5.1.3. Notify the 951 ELSG/OL1 (DSN 872-3527, extension 6648) Eglin AFB FL and 951 ELSG/OC (DSN 845-9438) Hanscom AFB, MA of any pending changes affecting aircraft performance to update the Flight Performance Model.

5.1.4. Ensure mandatory attendance by the FMMs to the FMESG meetings as directed by this instruction.

5.1.5. PC and ALC commanders must ensure proper support for the FMP from all Center elements. This includes developing procedures to ensure commodity managers and PMs coordinate proposed modifications that impact the Flight Manuals with the FMM office. Rapid and timely printing support of FMP publications is essential for flight safety.

5.1.6. The PM or SPD TO manager responsible for a military aircraft system's TOs must establish procedures to ensure the FMM is notified of all TO updates that could affect FMP publications. Procedures will also ensure notification of the responsible maintenance agency within the PM/SPD for inclusion into maintenance manuals, if applicable. The office with administration management responsibility for FMP publications will:

5.1.6.1. Establish printing priorities for FMP publications by coordination with the FMM and the base information management directorate. Give special attention to priorities and time limits for safety and operational supplements.

5.1.6.2. Track the production of all FMP publications through the entire publication cycle.

5.1.6.3. Establish procedures so crewmembers do not operate new or modified equipment or aircraft, without proper companion technical data according to AFPD 21-3, *Technical Orders*, AFI 21-303, *Technical Orders*, and TO 00-5-series TOs. Technical data must be at least to the level of verified Preliminary Tech Orders and will be in a format usable by aircrews. Red-line or mark-up data will not be used. Ensure draft technical data is available a minimum of 30 days prior to delivery of new or modified equipment/aircraft.

5.1.6.4. Establish and support an online electronic format that meets STINFO requirements (e.g., CoP) in order to provide FMMs an ability to effectively communicate and manage FM changes in coordination with the MAJCOMs representatives.

5.1.6.5. Coordinate with designated Lead MAJCOMs on any flight manual change affecting both operations and logistics.

5.2. FMM Responsibilities:

5.2.1. Manage the technical content, format and accuracy of assigned FMP publications as defined below and specified in AFD 21-3, AFI, 21-302, Technical Data Requirements For Logistic Support, AFI 21-303, AFI 20-101, Logistics Strategic Planning Procedures, AFI 63-101, Operations of Capabilities Based Acquisition System, TO's 00-5-Series Technical Orders, MIL-DTL-7700G and successive standards that may apply. This includes initial acquisition and verification, sustainment and periodic reviews.

5.2.2. Coordinate with the TO manager for FMP contracting, funding, numbering, printing, distribution and indexing.

5.2.3. Ensure overall compliance with policies and procedures established by HQ USAF/A4M; HQ AFMC/A4; HQ AFMC/A3; the Director, Nuclear Weapons Product Support Center, AF Air Armament Center (AAC/WNE, Eglin AFB FL, 32542); AF Air Armament Center (AAC/XR, Eglin AFB FL, 32542) (for non-nuclear weapons); and the Life Support System Program Director (77 AESG/TAL 311 HSW/YA, Brooks AFB TX, 78235).

5.2.4. Participate in the TO Planning and Requirements Conference, Guidance Conference, In Process Reviews (IPRs), preliminary and critical design reviews, pre- and post-publication reviews, Flight TO Review Boards (FTORBs) and other acquisition functions to develop and maintain quality control in assigned FMP and technical competence on their military system.

5.2.5. Determine requirements for new and updated FMP publications through coordination with using commands. Provide using commands a FM copy (online posting considered appropriate) that allows track changes electronically for a pre-publication review and comment NLT 7 days after editing process is complete (Production Phase) and prior to print package preparation. Maintain a permanent record of proposed MAJCOM changes and disposition of recommended changes.

5.2.6. Comply with schedules in [Attachment 4](#). Support aircraft test and delivery schedules.

5.2.7. Send requests for deviation or waiver of FMP TO specification requirements to lead command for coordination and AFMC/A4YE for approval (information copy to AFMC/A3V and HQ USAF/A4MM).

5.2.8. Maintain permanent records of all approved waivers and deviations to FMP TO specifications for the life cycle of the MDS.

5.2.9. When lead command approves the use of commercial manuals, maintain a permanent copy of the approval letter or document for the life cycle of the MDS (see [paragraph 2.6](#)).

5.2.10. Monitor FMP publications and other program TO's affecting the FMP for compatibility. Advise the USAF FMPM of all potential conflicts in FMP policy or specification.

5.2.11. Postpone minor correction/updates to FMP not affecting operations or safety until a major change or revision.

5.2.12. Submit FMP publications and updates for publishing and distribution (see [Attachment 4](#)). Notify using commands and the USAF FMPM of delays citing the reason for delay and include new schedule dates.

5.2.13. Issue an updated supplement concurrently with a change or revision when the change or revision contains part of that existing supplement. This will ensure that the revised supplement matches the revised data that was changed by the change or revision. Issuance of an updated supplement is not required for obsolete instructions that are not incorporated in the change or revision. For example, completion of a TCTO by the time the change is published may void the need for certain instructions in a supplement, while remaining instructions may be permanent guidance.

5.2.14. Ensure concurrent distribution of changes and revisions affecting flight manuals, associated checklists and any associated manuals.

5.2.15. Process safety and operational supplements as follows:

5.2.15.1. Issue an interim safety or operational supplement (if required) within 48 hours after receiving lead/using command and ALC/PC engineering (if required) validation and approval. The 48 hour clock begins when the MAJCOM approves the supplement. If no reply is received by using commands within 48 hours, then lead command and the FMM will consider the supplement approved.

5.2.15.2. Ensure initial distribution (ID) of formal safety or operational supplements not preceded by interim supplements within 48 hours for an emergency supplement and within 40 days for an urgent supplement. **NOTE:** Initial Distribution is "complete" on the date material is placed in Enhanced Technical Information Management System (ETIMS), (formerly Joint Computer-Aided Acquisition Logistics Support), the mail, or transmitted, whichever occurs first.

5.2.15.3. Request issuance of formal supplements, changes or revisions to replace interim supplements affecting checklists after validating the contents of the interim supplement.

5.2.16. Every effort will be made to ensure FMP publication changes or supplements associated with Time Compliance Technical Orders (TCTOs) are distributed before the TCTO publication, not later than 30 days prior to delivery or modification of the first aircraft affected. The FMM will coordinate with the TO manager to ensure concurrent delivery of manuals and associated checklists, supplements and TCTOs. The following options must be considered:

5.2.16.1. Obtain guarantee of concurrent delivery from the print contractor through Defense Auto Printing Service (DAPS). If DAPS cannot guarantee, obtain guarantee and printing support from off-base printing facilities.

5.2.16.2. Use Document Automation & Production Service (DAPS) on-demand printing services when available and the quality of print specifications can be met.

5.2.16.3. If neither is feasible, request a direct-deal printing contract with a vendor.

5.2.17. Establish a Quality Assurance (QA) program to inspect and approve reproduction media and printed or electronic copies of publications before distribution (e.g., inspection of the first article of a publication print run). **NOTE:** The QA program usually operates through Memoranda of Agreement or Understanding between the FMMs organization and the inspecting agency.

5.2.18. Determine the need for, schedule and chair a FMRC for each assigned publication.

5.2.19. Ensure funding is available for administrative requirements (reproducible copies of FMP publications) before convening an FMRC.

5.2.20. Coordinate all aerial refueling changes affecting flight manuals for HC/MC-130, KC-135, KC-10, and KC-45 through the normal AF Form 847 change process to FMMs.

5.2.21. Coordinate changes that affect international standard definitions, abbreviations and procedures for refueling IAW ATP56 change procedures. Also coordinate AF wide aerial refueling configuration changes that affect international refueling procedures IAW ATP-56(B) change process. It is essential that FMMs provide comments, corrections, and queries regarding ATP-56(B) in order to keep the international standard up-to-date. Submit changes on an AF Form 847 through channels established by major commands, to HQ AMC/A3VK at ATP-56@scott.af.mil.

5.2.22. Coordinate all MDS-specific non-nuclear weapons manual (-34 series) changes that impact specific weapons with the FMM for the parent TO 1-1M-34 (AAC/AQY). To ensure standardization of all weapons issues, accomplish coordination prior to finalizing any changes.

5.3. Flight Manual Review Conference (FMRC):

5.3.1. The FMM for a weapons system will act as the chairperson for the FMRC for that weapon system and will conduct an FMRC at least annually unless using commands agree to delay. The FMM will notify the USAF FMPM and MFMPM of all scheduled FMRC dates and any proposed rescheduled dates.

5.3.2. FMRC Agenda:

5.3.2.1. Develop an agenda to include a review of all recommended changes (AF Forms 847 or electronic change process request), service bulletins, Operations Manual Bulletins, FAA Airworthiness Directives, and Temporary Revisions and like data (ref. TO 00-5-Series) that apply to the FMRC directed weapon system.

5.3.2.2. Notify FMRC participants, including AFMC/A3V and using commands of the proposed FMRC date 90 days prior to the scheduled FMRC.

5.3.2.3. Make copies of all proposed agenda items, including AF Form 847s available electronically no later than 30 days prior to the scheduled FMRC start date using the CoP or AF approved secure web page. Notify additional (supporting) FMRC participants, as necessary, to include aircraft manufacturer, engineering support, publishing contractor, and Air Force Safety Center.

5.3.2.4. Agenda items from the field are due to the FMM no later than 45 days prior to the scheduled FMRC. Routine items received after this time will be addressed at the end of the FMRC as "additional items." Additional items may or may not be included in the

subsequent change depending on completion of engineering analysis or other required actions.

Table 5.1. FMRC Schedule of Events.

Notification	Solicit Agenda Items	Publish Agenda and all submitted Form 847s	Publish Minutes
Notify participants of proposed FMRC 90 days prior to scheduled date.	Proposed agenda items due to the FMM 45 days prior to scheduled date.	30 days prior to scheduled FMRC start date.	30 days after completion of FMRC.

5.3.3. Ensure all mishap AF Forms 847 and quality deficiency reports affecting the FMRC MDS aircraft are reviewed without regard to timelines specified in [5.3.2.4](#)

5.3.4. Publish FMRC minutes electronically on the FMMs CoP within 30 days and forward notification of posting to AFMC/A3V, lead and using commands and all attendees. Include a listing of all recommended changes considered with final disposition. Minutes will include comments justifying any recommended changes (AF Form 847/electronic change process request(s)) approved and disapproved at an FMRC. Recommended changes in FMRC minutes will be referred to by their AF Safety Automated System (AFSAS) mishap ID for safety proposals or by the tracking numbers for the highest AF unit in the echelon for routine recommended changes (AF Forms 847 or electronic change process request). Using commands and other agencies will access FMRC minutes through the Flight Manual Manager's online electronic format, (CoP or AF approved secure web site).

Chapter 6

MAJCOM RESPONSIBILITIES

6.1. General Responsibilities. Using commands (including FOAs/DRUs) will ensure personnel comply with this instruction, AFPD 21-3, AFI 21-302 and 21-303, and TO 00-5-Series publications.

6.2. MAJCOM Flight Manual Program Manager (MFMPM): Each command A3 and FOA/DRU (as required) will assign a primary and alternate Flight Manual Program Manager for the command. Forward the names of these individuals to AFMC/A3V for inclusion on the USAF Flight Manuals CoP whenever personnel change. The MFMPM will:

6.2.1. Be the single point for flight manual issues for that command. For each weapon system in which the MAJCOM is lead, that individual (and alternate) will also serve as primary and alternate voting member of the FMESG (reference [Chapter 3](#)) and in addition the MAF and CAF MFMPMs will be voting members on the AF CTOM Committee.

6.2.2. Assist in development of the MAJCOM TO digitization strategy for each weapons system for which the MAJCOM is responsible for, including new acquisition programs. All FMs are required to meet the guidelines established in the AF TO CONOPS. Provide USAF Flight Manual Manager with a copy of the TO digitization strategy for each weapon system for which the MAJCOM is lead at the beginning of each FY. Assist the SM/SPD and FMM in determining the scope of technical material to be included in FMs and the overall needs of the user. Update SM/SPD and FMM on new military specification, military standard, print and or paper requirements for budget inclusion in CAFTOP process.

6.2.3. Ensure verification is complete for FMs of assigned military weapon systems and IAW approved verification plans. The TO Manager, in coordination with the Lead/Using Commands, may designate or delegate this responsibility to a separate organization.

6.3. ALL MAJCOMs:

6.3.1. Publish a listing containing the MAJCOM FM POC for each MDS that the command operates (PACAF and USAFE responsibilities for this will reside with the MDS lead Command). Forward this listing to HQ AFMC/A3V for inclusion on the USAF Flight Manuals CoP, include the name, e-mail and DSN. Additionally, each MAJCOM (and subordinate level) will establish a Workflow email account address for receiving FMP information.

6.3.2. Establish procedures for processing and coordinating all recommended changes (AF Form 847 or electronic change process) according to [Attachment 2](#) and the following instructions:

6.3.2.1. Ensure procedures prevent forwarding of duplicate of recommended changes. Use only one AF Form 847 (or electronic change process request) when the identical change proposal effects both the basic flight manual and its abbreviated checklist.

6.3.2.2. Establish an electronic means to inform lead and using commands of the coordination requirements and disposition of recommended TO changes (CoP or AF approved secure web site). Ensure the originator is informed of the disposition of each

recommended change at each level of the approval process; this may be accomplished using an online data base accessible by the originator.

6.3.2.3. PACAF and USAFE will coordinate with respective MDS Lead Commands an appropriate process to ensure recommended change coordination and responsibilities are met.

6.3.3. Ensure FMP publications are maintained in the highest state of currency and accuracy including the evaluation of assigned publications according to AFI 11-202V2, *Aircrew Standardization/Evaluation Program*.

6.3.4. Ensure FMP publications are readily available to meet all aircrew and mission requirements. MAJCOMs will comply with the following instructions:

6.3.4.1. Establish procedures for the accounting and issuance of personal copies of needed FMP publications in electronic or paper format to flight crewmembers on active flying status. Any flight crew member who requests a personal copy will have it provided. Do not issue new FMP publications until in receipt of all associated basic and abbreviated checklist changes. MAJCOM Stan/Eval functions may only withhold the immediate release of updates, excluding interim or formal supplements, until the updates are available to all crewmembers on weapons system within their command. Interim and formal supplements will be released immediately, unless supplement or notification instructions state otherwise or they contain errors that would jeopardize safety or operational posture, in such cases the safety or operational concern must be resolved within 30 days. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.3.4.2. Establish internal distribution procedures for electronic or paper FMP publications, including interim safety and operational supplements, so that flight crewmembers have all changes and revisions affecting required flight manuals, checklists and any associated manuals before participating in flight operations. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.3.4.2.1. As paper FMs continue to be the emergency backup for use inflight for the majority of the AF weapon system inventory, MAJCOMs may withhold release of digital media until paper is distributed (**NOTE:** FM printing costs are accounted for in the publication process (CAFTOP) and remain the responsibility of the PM/SPD office).

6.3.4.2.2. Establish procedures to ensure concurrent use of scroll, electronic checklists and paper FMP products. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.3.4.2.3. To ensure a redundant system is in place to view FCIF Library anytime, establish policy to backup any electronically viewed publications kept in the FCIF library.

6.3.4.3. Electronic and paper checklists should be maintained concurrently. However, MAJCOMs may establish procedures to allow use of one medium with the other medium

non-current provided operators are notified and aware of the difference. MAJCOMS will establish which checklist will be used as primary reference.

6.3.4.3.1. MAJCOMs are responsible for coordinating through appropriate maintenance channels to ensure update of the onboard integrated electronic checklists (when aircraft systems contain this material) to the most current version as soon as practical. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.3.4.3.2. Crewmembers that use onboard integrated electronic checklists (Flight Management Systems, not a removable laptop system) as their primary reference in-flight will use the most current publication for review before and during flight.

6.3.4.4. Establish procedures for periodic reviews to ensure currency of flight crewmembers' FMP publications.

6.3.5. DELETED

6.3.6. Provide representative(s) and identify who has the authority to act for the command at FMESG conferences and FMRCs for command operated aircraft.

6.3.7. Conduct a command analysis of applicable FMP publications, including nuclear weapon and non-nuclear munitions delivery manuals, for each FMRC. Send change recommendations to the FMM a minimum of 30 calendar days before scheduled FMRCs, or when the FMM requests. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met. **NOTE:** Non-MAJCOM reviewed recommended changes (i.e., walk-ins) will be considered at the FMRC after all agenda items are covered.

6.3.8. Identify to the FMM any unique requirements needed for the flight manual or checklist, (e.g., use of synthetic paper stock IPDF, new checklist style, etc.) at least 60 calendar days before the FMRC. If funding differs from FY submitted CAFTOP, then coordinate for appropriate funding. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.3.9. Establish procedures in the command supplement to this instruction to identify publication problems that are not reported by an AF Form 847 (or electronic change process request), such as word omissions, typographical, printing or quality errors. If MAJCOMs conduct formal flight test include interim modification flight manuals (MFMs) and checklists development guidance in the MAJCOM formal supplement, include in it the review and approval levels of responsibility.

6.3.10. Establish an internal process through MAJCOM Stan/Eval offices whereby a pre-publication review of flight manual changes or revisions can be accomplished for the FMM. The MAJCOMs will be provided 7 days between FMM's editing process and the 10-day prepublication review process to review any changes in the FM. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

6.4. Lead MAJCOMs:

6.4.1. Are advocates for their assigned flight manuals and must respond to issues addressing status and use. Advocacy includes planning, programming, and budgeting for designated flight manuals and assisting in development of digitization strategy for FMs. Lead commands will:

6.4.1.1. Fund flight manuals needed by all using commands.

6.4.1.2. Ensure all assigned flight manuals for which the PM is responsible are addressed in the MDS/weapon system-specific CAFTOP annex and associated TO Information Spreadsheet (TOIS).

6.4.1.3. Prioritize identified flight manual requirements with using commands in the yearly Technical Order Requirements Plan (TORP). The TORP translates the PMs/SPD CAFTOP Annex and TOIS into a year-by-year summary of requirements through the Future Years Defense Plan (FYDP). This prioritization will take into account both the availability of funding and how the allocation of funding impacts lead and using command war-fighting capabilities.

6.4.1.4. Determine the relative priority of out-of-cycle requirements submitted outside of the TORP process with using commands and whether or not each will be funded.

6.4.1.5. Coordinate with all affected MAJCOMs prior to approving changes to aerial refueling procedures for publication.

6.4.1.6. Verify that all using MAJCOM routine and emergency recommended changes concur/non-concur responses have been forwarded to the FMM and affected MAJCOM(s) and ensure the respective FMM has all the submitted recommended changes prior to the FMRC (electronic posting and notification will suffice in both cases).

6.4.1.7. Support the FMP acquisition process in accordance with the requirements of TO 00-5-Series.

6.4.1.8. Coordinate with all using commands prior to approving changes and supplements.

6.4.1.9. Coordinate with AAC/AQY on all recommended changes to MDS-specific -34 series tech orders that impact specific weapons.

6.4.1.10. Determine MDS specific distribution requirements and procedures IAW 00-5-Series TOs and fully coordinate these procedures with the SPO, FMM and using MAJCOMs. Flight Manual products may be disseminated either electronically i.e. ETIMS or through approved conventional means. In extenuating circumstances electronic distribution may include the use of encrypted e-mail or posting and download from an AF approved secure web site or CoP in accordance with AFI 33-Series publications, however this is not the normal AF distribution method. At no time can unclassified/unencrypted e-mail be used for restricted distribution or classified data. DOD Public Key Infrastructure (PKI) encryption, as implemented in the Air Force Common Access Card (CAC), may be used to disseminate unclassified restricted distribution and proprietary data.

6.4.1.11. Host a CoP that provides a single source for management of its AF Form 847 FM change request for all other MAJCOM's coordination.

6.4.1.12. Coordinate with the other component services Lead organizations and FMMS to establish Joint use FMs (e.g. NATOPS) when required. MAJCOMs must balance component requirements with the AF requirements stated here in AFI 11-215 and other service component guidance. Include in the coordination and process development:

6.4.1.12.1. Flight manual engineering authority, publication, review (quality assurance), distribution and change processes as outlined in this AFI and AFJI 21-301.

6.4.1.12.2. Flight manual funding line of authority if it differs from AFJI 21-301.

6.4.1.12.3. Modification flight manual publication, review, distribution and change process as applicable to test aircraft.

Chapter 7

FLIGHT CREWMEMBER RESPONSIBILITIES

7.1. Flight crewmembers will:

7.1.1. Follow FMP publications, authorized supplements, and associated checklists during aircraft operations.

7.1.2. Flight crewmembers will make write-in references to each affected paragraph in flight manuals to direct attention to current supplements. Make write-in changes to checklists as specified in the interim supplement in full, if practical. Pencil write-ins or typed stickers are authorized to accomplish write-in changes to pages. Write in changes can also be performed by using software programs that allow text edit/over write functions.

7.1.3. Flight crewmembers may make notes in their individually assigned flight manuals and checklists. Highlighting of important information in personally issued paper flight manuals is permissible.

7.1.4. Keep personal flight manuals and checklists current.

7.1.5. Recommend FMP publication changes on AF Form 847 (or electronic change process request) as required.

Chapter 8

ELECTRONIC FLIGHT MANUALS, LIST OF EFFECTIVE PAGES (LEP) CHECKS, AND DIGITAL DATA

8.1. General. Approval of electronic in-flight viewing of flight manual data will be delegated to MAJCOM/A3 through the Stan/Eval function. Standard Generalized Markup Language (SGML) is the minimum acceptable level of digitization, for primary crew positions (i.e., pilot, navigator, weapon systems operator, flight engineer, loadmaster, boom operator, etc.). Apply this minimum standard when using digital data as the primary source for accessing and using flight manuals (to include electronic checklists) for flight through an e-tool (electronic kneeboard, COTS computer, electronic flight bag, etc.). The SGML standard is set to provide an enterprise level model to be used with ETIMS Common Viewer/Transformer. PACAF and USAFE will coordinate, with respective MDS Lead Commands, an appropriate process to ensure procedures and responsibilities are met.

8.1.1. Approval for in-flight use of any type of personal electronic device (e-kneeboard or COTS computer) for viewing flight manuals (including checklists) in flight will be obtained prior to use. These devices must be certified and approved in accordance with AFI 11-202V3, *General Flight Rules*.

8.1.2. LEP checks are a comparison of the page and change numbers on each page of a FM with the data on the LEP.

8.1.2.1. LEP checks are mandatory when changes and revisions to paper FMs are posted. When changes are posted, only the changed pages must be checked. When a revision is posted, all pages in the FM must be checked. If a digital TO file is used to print a FM then the FM will have an LEP posted.

8.1.2.2. When FMs are distributed in both paper and digital format (e.g. IPDF/PDF) the LEP check will be entered in the Remarks window of the corresponding ETIMS (formerly ATOMS) record for the TO for the digital file and must be recorded on the paper copy. LEP discrepancies found in paper or digital will be reported to the FMM immediately. Discrepancies on PTOs will be reported to the FMM indicated on the title page of the PTO.

8.1.2.3. LEP checks on digital FM files are only required when the TODO/TODA electronically posts (merges) a digital FM change file into the baseline FM file, to verify that the two files were properly merged (no pages omitted, duplicated, inserted in the wrong place, or deleted pages left in the file). The LEP check must be performed using the FM intended viewing software application as prescribed by the FMM (do not print a copy of the FM file to perform the LEP check).

8.1.2.4. Annotate the title page or LEP with the date, type “(annual/revision or change), and reviewer initials, as well as any discrepancies (missing pages, improper printing, etc.). For digital FM files, enter this data in the Remarks window of the corresponding ETIMS (formerly ATOMS) record for the FM or in the FM Notes of the corresponding FM in the ETIMS (formerly ATOMS) database. Discrepancies found on the LEP page will be reported to the FM Manager by the AF Form 847. LEP checks are required for

commercial manuals with LEPs. Page checks are required for brief manuals or COTS manuals without LEPs.

8.2. MAJCOM Responsibilities.

8.2.1. MAJCOMs will establish policy and standardized programs to manage the distribution and verify currency of electronic flight publications issued to aircrew members.

8.2.2. MAJCOMs will establish policy to ensure printing complete flight manuals from the digital file is limited to a case-by-case basis to prevent configuration control problems and minimize excessive printing cost (**NOTE:** print cost for flight manuals are accounted for in the publication budgeting (CAFTOP) process). Printing small quantities of replacement pages is encouraged in lieu of requisitioning the entire flight manual. Any local printing will be accomplished using print qualities as outlined in [paragraph 2.3.1](#). In addition, in the future some flight manuals may be sent digitally and printed on demand via the Distribute and Print Gateway through the Document Automation and Product Service (DAPS) Centers in coordination with the FMMs or print specialist working for the FMMs.

8.2.3. The primary source for digital FM is the TO Account subscription on ETIMS (formerly JCALS/Web ATOMs) and in the future GCSS. Alternate sources of distribution are the Communities of Practice (CoP) Web Pages as long as all FM data is updated and verified with the ETIMS source data.

8.2.3.1. This method may be used with all unclassified, restricted distribution data, whether technical or not, including preliminary, interim and formal TOs, TCTOs, engineering data and competition sensitive data.

8.2.3.2. Data to be uploaded or downloaded is sent through a secure “tunnel” between the CoP server and individual PCs. Refer to 00-5-series of TOs for additional CoP distribution requirements.

8.2.4. Unit commanders will determine the proper mix of paper and digital flight manual copies. Sufficient flight manual copies must be available for mission planning (commensurate with available computer viewing resources), in-flight operations and personal study.

8.2.5. Personal copies of flight manuals may either be paper or digital copies as long as compliance with this chapter is met. Units that issue digital copies on portable storage devices (i.e. PDA, memory sticks, laptops, etc.) are required to establish a system of control to ensure distribution statements and data at rest requirements are met.

8.2.6. Identify procedures and policy for marking and storage of digital TO/media on all devices (i.e. portable storage devices, including laptops, PDAs, thumb drives, etc.) IAW 00-5-series TOs.

8.2.7. MAJCOMs who elect to permit the use of an e-tool for displaying flight manual information will establish policy and procedure for use and include it in the MAJCOM supplement. Specifically address the following topics in the MAJCOM supplement:

8.2.7.1. Approved flight manual (or checklists) format for the e-tool display and crew position, who will use the device and the eTool FM update management process.

8.2.7.2. Approved flight certified model and type of the e-tool to be used by crewmembers.

8.2.7.3. If an e-tool is authorized for displaying flight manual information by the MAJCOM, applicable paper flight manuals will be available on the aircraft to ensure data redundancy (in case of viewing device failure). If a certified weapon system IETM is approved by Air Force weapon system PM/FMM and is acquired for use, MAJCOMs will establish a backup system (either e-tool or paper copy) for viewing FMs in flight. In the case where paper is used as a backup, MAJCOMs will establish procedures to ensure paper copies are properly maintained and posted concurrently with electronic version. This does not apply to aircraft which do not produce or use paper products, although they will ensure redundancy of an e-tool in case of viewing device failure.

8.2.7.4. All available formats of a TO or TO update (paper, digital medium, electronic file) must be released concurrently to maintain TO configuration control. When dual paper and digital flight manual media exist, these media will be distributed concurrently by the FMM to all users to avoid data mismatch or obsolescence. If the FMM is unable to release both types of media concurrently, then using commands will be notified.

8.2.7.5. Electronic and paper checklists should be maintained concurrently. However, MAJCOMs may establish procedures to allow use of one medium with the other medium non-current provided operators are notified and aware of the difference. MAJCOMS will establish which checklist will be used as primary reference.

8.2.7.5.1. Some MDS may employ integrated electronic checklists uploaded into aircraft computers and viewed on aircraft displays (FMS) as the primary reference in-flight (in contrast to removable viewing devices such as a laptop, electronic kneeboard, PDA, etc.).

8.2.7.5.2. There may be cases where the paper copy of the integrated electronic checklist (Flight Management System, FMS) update is not available for reference before flight. If a new software push to the aircraft was accomplished and the paper copies do not arrive at the same time, MAJCOM Stan/Eval offices will coordinate with the FMM to obtain and print an updated paper copy of changes from a FMM source site and distribute accordingly (this responsibility may be delegated).

8.2.8. When approving digital data for in-flight use, MAJCOMs must consider whether human factors/human effectiveness issues have been addressed in the electronic display for a specific data format and limit use where appropriate.

Chapter 9

RECOMMENDING CHANGES TO FMP PUBLICATIONS

9.1. General. Configuration control of a weapon system is managed by the weapon system PM or SPD. The PM/SPD has ultimate approval authority for changing flight manual content. Submit recommended changes to FMP publications on AF Form 847 (use approved forms available on the AF Publishing Website, <http://www.e-publishing.af.mil> or utilizing electronic change process requests through the Enhanced Technical Information Management System (ETIMS)), when available, according to the procedures below. When the ETIMS electronic change process is available and implemented throughout a MAJCOM, it will be the only method authorized for changing flight manuals.

9.1.1. Submit emergency recommended changes for conditions that require immediate correction to prevent fatality, serious injury to personnel, extensive damage or destruction of equipment or property or inability to achieve or maintain operational posture. Submit routine reports for conditions that are potentially hazardous from prolonged use, have negative effects on operational efficiency; reduce operational life or general service use of equipment.

9.1.2. Do not use the AF Form 847 (or electronic change process request) to call attention to line/word omissions, typographical, printing or quality errors usually corrected during scheduled reviews unless they cause misinterpretation or affect comprehension.

9.1.3. The PM/SPD will ensure that all data having potential impact on the FMP that are generated from Quality Deficiency Reports (QDR), Engineering Assignments, Mishap Investigations, TCTO(s), modifications are routed through the FMM for proper evaluation.

9.1.4. Use only one AF Form 847 (or ETIMS, electronic change process) when the identical change proposal affects both the basic flight manual and its abbreviated checklist. Units will submit AF Form 847s electronically. Every effort should be made to ensure the originator is informed of the disposition of each recommended change at each level of the approval process. If the recommended change is too large to fit onto one AF Form 847, note this on the submitted form and provide an attached word document or an edited version (using text editing/over-writing software) of an electronic copy of the FM or checklist.

9.2. Processing Routine Recommended Changes.

9.2.1. Submit and process all AF Forms 847 (or ETIMS electronic change process request) through MAJCOM channels as outlined in their supplement (if applicable) to this instruction, in accordance with routing as outlined in **Attachment 2** and in compliance with the instructions in **Attachment 3**. **NOTE:** Except for those weapon systems for which the NGB is lead command, all NGB units must send recommended changes to their gaining MAJCOM Stan/Eval office through the numbered Air Force (NAF) (or its equivalent), as outlined in the MAJCOM supplement. Information copies should be sent electronically to NGB/A3O@ang.af.mil. When electronic transmission is not possible, mail them to: NGB/A3, 1411 Jefferson Davis Highway, Arlington, VA, 22202.

9.2.2. There are instances where AF Form 847 change request could affect adjustment, configuration, modification, repair, servicing, and operational checkout of aircraft weapons systems and related equipment thus affecting corresponding maintenance TOs. In these

cases forward a copy of the change request to the MAJCOM/A4 functional OPRs for their review.

9.2.3. Authority for disapproving a unit-submitted recommended change rests with the parent MAJCOM. All disapproved recommendations will be posted on MAJCOM CoP for AF Form 847 coordination or returned to the unit, in either case they must include justification annotated on the AF Form 847 (or CoP) stating the reason for the disapproval. Disapproved recommendations are not normally forwarded to other MAJCOMs, but may be forwarded for additional considerations if desired. Disapproved recommendations may be resubmitted with additional justification under a new control number.

9.2.4. Using MAJCOMs have 30 days to comment on recommended change suggestions. Comments on the AF Form 847 suggestions will be forwarded to the lead MAJCOM or posted on the lead MAJCOM CoP for AF Form 847 coordination. Lead commands will ensure all submitted recommended changes are forwarded to (or posted for review/action with notification) the FMM prior to the FMRC. Any MAJCOM disagreements will be resolved at the next FMRC.

9.2.5. When the recommended change reaches the FMM, the FMM will forward it to the MDS ALC/PC engineering function for review (if required). If the lead and all using MAJCOMs have approved the change, the FMM may either publish the recommended change or hold the recommended change for the next FMRC, based on its urgency and MAJCOM requirements. If the FMM disapproves the recommendation either before or at the FMRC or it is disapproved by an engineering review conducted by an ALC/PC MDS engineering function, the FMM will annotate the justification for disapproval and return the form to the submitting MAJCOM (by posting on FMMs CoP) and address the disposition in the FMRC minutes.

9.2.6. The FMM will notify the submitting MAJCOM of the disposition of all recommended changes by posting on the FMM CoP, in the minutes of the FMRC, and if required by e-mail within 30 days of receipt.

9.2.7. Individuals should not submit an AF Form 1000, *IDEA Innovative Development through Employee Awareness Application*, in conjunction with changes to flight manuals. Submitting this form to change flight manuals may delay processing of valid recommended changes. This action may result in potentially hazardous condition, inefficient operational practices, or reduced equipment life. Individuals desiring recognition through the Air Force IDEA Program may submit a confirmatory suggestion (after-the-fact) in accordance with AFI 38-401, paragraph 3.9.1.

9.2.8. The recommended change and routing process for ATP-56 flows differently than the normal AF Form 847 process and can be found in the ATP-56 manual. All previous paragraphs within this section (9.2) apply to recommending changes for flight manuals and include the FMM as the final approval authority. However the final approval authority for the ATP 56 is HQ AMC/A3VK. HQ AMC/A3VK will notify the MC/HC-130, KC-135, KC-10 and KC-45 FMMs of the approval/rejection of recommended changes that affect these FM prior to ATP-56 publication/changes.

9.3. Emergency Generated Recommended Changes.

9.3.1. Submit an emergency recommended change in the same manner as with routine submission. Mark the “yes” under block 5 of the AF Form 847. Route emergency AF Forms 847 as in **Table 9.1**. Forward information copies as with routine AF Forms 847.

9.3.1.1. Emergency recommended changes will be sent to the parent MAJCOM (or FOA), with an information copy to the MDS FMM.

9.3.1.2. Originating MAJCOM/FOAs/DRUs or MAJCOMs/FOAs receiving emergency recommended changes from subordinate units, must send approved emergency recommended changes to the weapon system FMM, AFSC/SEF and all using MAJCOMs/FOAs/DRUs operating the same aircraft within 48 hours after receiving the original submission. Other affected MAJCOMs/FOAs/DRUs must send their concurrence or comments to the FMM (with information copies to the submitting MAJCOM and AFSC/SEF) within 48 hours after receipt.

9.3.1.3. The originating MAJCOM/FOA/DRU must send disapproved or downgraded (to routine) emergency recommended changes (including justification for disapproval/downgrading) to the initiating unit, the FMM, AFSC/SEF and other using MAJCOMs. The originating MAJCOM/FOA/DRU must process downgraded recommended changes as routine.

9.3.1.4. The FMM must inform all MAJCOMs/FOAs/DRUs and government agencies using affected TOs of intended action on emergency recommended change within 60 hours after receipt. If a recommended change is disapproved or downgraded, the FMM must include justification for this action.

9.3.1.5. If any command has not received notification of the FMMs intended actions within 60 hours after its original approval message, they will take follow-up action within 12 hours.

Table 9.1. Emergency Recommend Change Routing

R U L E	A	B	C
	IF THE NOTIFICATION IS FROM:	AND IS ADDRESSED TO THE	THEN INFO COPY IS SENT TO
1	Unit	MAJCOM	FMM
2	Safety Investigation Board		FMM & HQ AFSC/SEF
3	MAJCOM	FMM or other MAJCOM	HQ AFSC/SEF and originating unit
4	FMM	MAJCOM	Other using MAJCOMs

9.4. Safety Investigation Generated Recommended Changes. Safety investigation generated recommended changes must originate from a formal safety investigation. This includes mishaps defined as Class A, Class B, Class C or Class E and events such as High Accident Potential (HAP) and Hazardous Air Traffic Reports (HATR).

9.4.1. Recommended changes generated as a result of an aircraft mishap will be written by the Safety Investigation Board (SIB) and submitted electronically to the parent MAJCOM Stan/Eval function of the mishap aircraft. IAW 91-204, *Safety Investigations and Reports*, and when requested the MAJCOM Stan Eval office will provide a tracking number to the SIB. The parent MAJCOM Stan/Eval function will make a determination if the recommendation requires immediate (emergency) action.

9.4.2. Annotate the AFSAS ID number in the unit identification portion of the AF Form 847 for all safety investigation generated AF Forms 847 and check "yes" under block 5. The AFSAS number will be the primary means of identifying safety investigation generated AF Forms 847. If the safety investigation generated AF Form 847 is also an emergency submission, annotate "EMERGENCY RECOMMENDATION" as the first entry in Block 17.

9.4.3. Forward all emergency generated recommended changes submitted as a result of a mishap investigation in accordance with [Attachment 2](#) and [paragraph 9.3](#). Forward information copies to MAJCOM/SE and AFSC/SEF, 9700 G Ave SE, Kirkland AFB, NM 87117. Notify AFSC/SEF and the command having accident accountability of the final recommended change disposition.

9.4.4. The FMM or using command(s) must justify any disapproved recommended change submitted as a result of a safety investigation. Forward those comments to the command having accident accountability, AFSC/SEF and using commands. MAJCOMs must also notify the FMM if they disapprove any recommended changes submitted as a result of a safety investigation.

Chapter 10

RECOMMENDING AIR FORCE PUBLICATION IMPROVEMENTS

10.1. General. This chapter does not apply to flight manuals publications as specified in **Chapter 2**. Unless different guidance is provided by the appropriate AF publication OPR, submit recommended changes and improvements to Air Force publications on AF Form 847 (use approved forms available on the AF Publishing Website <http://www.e-publishing.af.mil> according to the procedures below and **Attachment 3**. Submit emergency reports for conditions that require immediate correction to prevent fatality, serious injury to personnel, extensive damage to property or a reduction in operational posture. Submit routine reports for conditions that have negative effects on operational efficiency, to correct content errors or to recommend improved procedures or processes. Do not use the AF Form 847 to call attention to word omissions, typographical, printing or quality errors usually corrected during scheduled reviews unless they cause misinterpretation.

10.2. Processing AF Forms 847.

10.2.1. Submit and process all AF Forms 847 through MAJCOM channels as outlined in the MAJCOM supplement to this instruction in accordance with routing as outlined in **Attachment 2** (with the AF publication OPR defining the process at the FMM level in the Attachment) and in compliance with instructions in **Attachment 3**. Units will submit AF Forms 847 electronically. Submitting organizations, below MAJCOM level, should forward recommendations to the MAJCOM functional OPR for the publication. For example, if the publication deals with a 36-XXX series instruction, the MAJCOM OPR would be MAJCOM/A1. The submitting MAJCOM will forward approved recommendations to the appropriate OPR. The ultimate approval authority for Air Force publications is the OPR as listed on the front page of the publication.

10.2.2. The submitting MAJCOM will forward information copies of AF Forms 847 to all other MAJCOMs that utilize the AF publication. Using MAJCOMs will forward comments on AF Forms 847 suggestions to the OPR for the publication.

10.2.3. Authority for disapproving an AF Form 847 rests with the submitting MAJCOM and the OPR for the publication. All disapproved recommendations will be returned to the submitting MAJCOM with justification annotated on the AF Form 847 stating the reason for the disapproval.

10.2.4. The OPR for the publication will notify the submitting MAJCOM as to the final disposition of the recommendation.

10.2.5. Ensure the originator is informed of the disposition of each AF Form 847 at each level of the approval process.

Chapter 11

LOCAL FLIGHT MANUAL PROGRAM PROCEDURES

11.1. General. Units may generate a supplement to this instruction to facilitate implementation of the FMP. This supplement will be distributed to MAJCOM/NAF OPRs, as applicable. This supplement should not duplicate and will not be less restrictive than the provision of this or any other publication without prior authorization from the appropriate MAJCOM/NAF OPR.

11.2. Local Operating Procedures. The purpose of the unit local FMP procedures supplement is to document specific local procedures. Post the units supplement behind the basic volume. If requirements of this supplement are incorporated in another base instruction, a single page supplement will be used either referencing the base instruction, or as a cover for other instruction inserted, as appropriate.

11.2. (433AW)Local Operating Procedures. 433OG/OGV Flight Manual Program (FMP) procedures are defined in AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 433 AW Supplement.

11.3. Information Collection, Records, and Forms

11.3.1. Information Collections. No information collections are accomplished by this publication.

11.3.2. Records. The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AFRIMS RDS located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

11.3.3. Forms (Adopted and Prescribed).

11.3.3.1. Adopted Forms:

AF Form 847, *Recommendation for Change of Publication*, 22 Sep 09

AF Form 1000, *IDEA Application*, 1 Aug 02

Use AF Form 847 (or electronic change process) to recommend improvements to FMP TOs. When other instructions require, use this form to make recommended changes. These publications have specific processing instructions in them. If an AF Form 847 contains classified data, mark it according to guidance in DOD 5200.1-R or AFI 31-401, *Information Security Program Management*, and route using classified SIPRNET channels as outlined in [Attachment 2](#) and in compliance with the instructions in [Attachment 3](#).

11.3.3.2. Prescribed Forms:

Submit waivers on AFMC Form 73, *AFMC/A3V Wavier Request*. MIL-PRF-32216 "Evaluation of Commercial Off-The-Shelf (COTS) Manuals and Preparation of Supplemental Data.

DANIEL J. DARNELL, Lt Gen, USAF
DCS, Operations, Plans & Requirements

(433AW)

ADAM B. WILLIS, Lt Col, USAFR
433D Operations Group, 433D Airlift Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

(Added-433AW) AFMAN 33-363, *Management of Records*, 1 March 2008

Public Law 96-511, *The Paperwork Reduction Act of 1980* (amended by Public Law 104-13, *The Paperwork Reduction Act of 1995*)

GPO Publication 310.1, *Quality Assurance Through Attributes Program For Printing and Binding*.

DOD 5200.1-R, *Information Security Supplement to DOD 5200.1*, 1 Apr 1987

(Added-433AW) AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 13 September 2010

(Added-433AW) AFI 11-215, *USAF Flight Manuals Program (FMP)*, 22 December 2008

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, 8 Mar 2007

AFI 10-901, *Lead Operating Command—Communications and Information Systems Management*, 22 Mar 2001

AFPD 11-2, *Aircraft Rules and Procedures*, 14 Jan 2005

AFI 11-202, Volume 1, *Aircrew Training*, 17 May 2007

AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, 8 Dec 2006

AFI 11-202, Volume 3, *General Flight Rules*, 5 Apr 2006

AFI 20-101, *Logistics Strategic Planning Procedures*, 12 Nov 1993

AFMCI 21-126, *Temporary 2 (T-2) Modification of Aerospace Vehicles*, 19 Jul 2005

(Added-433AW) AFPD 11-2, *Aircrew Operations*, 19 January 2012

AFPD 21-3, *Technical Orders*, 10 Jul 2006

AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*, 12 May 1989

AFI 21-302, *Technical Data Requirements for Logistic Support*, 2 Sep 1977

AFI 21-303, *Technical Orders*, 8 Oct 2006

AFI 31-401, *Information Security Program Management*, 1 Nov 2005

AFMAN 33-363, *Management of Records*, 1 March 2008 AFI 38-401, *The Air Force Innovative Development Through Employee Awareness (IDEA) Program*, 21 Nov 2007

AFI 63-101, *Operations of Capabilities Based Acquisition System*, 29 Jul 2005

AFI 61-204 *Disseminating Scientific and Technical Information*, 30 Aug 2002

AFI 63-104, *The SEEK EAGLE Program*, 21 Jan 2005

AFI 91-204, *Safety Investigations and Reports*, 24 Sep 2008

ATP-56(B), *Air-To-Air Refueling*, 1 Apr 2007

TO 00-5-1, *AF Technical Order System*, 29 Nov 2007

TO 00-5-3, *Technical Manual Acquisition Procedures*, 1 Mar 2007

TO 00-5-19, *Security Assistance Technical Order Program*, 26 Jan 2004

MIL-PRF-32216, *Evaluation of Commercial Off-The-Shelf (COTS) Manuals and Preparation of Supplemental Data*, 17 Oct 2006

MIL-DTL-7700G, *Detail Specification, Flight Manuals, Air Refueling Procedures, and Abbreviated Checklists*, 13 May 2002

MIL-DTL-87268C, *Interactive Electronic Technical Manuals*, 22 Jan 2007

(Added-433AW) Adopted Forms

(Added-433AW) AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AAR—Air to Air Refueling

(Added-433AW) AF—Air Force

(Added-433AW) AFB—Air Force Base

(Added-433AW) AFI—Air Force Instruction

(Added-433AW) AFMAN—Air Force Manual

AFMC—Air Force Material Command

(Added-433AW) AFPD—Air Force Policy Directive

AFRIMS RDS—Air Force Records Information Management System Records Disposition Schedule, <https://www.my.af.mil/gcss-af61a/afrims/afrims/>

AFSAS—AF Safety Automated System

ALC—Air Logistics Center

AMHS—Automated Message Handling System

ANG—Air National Guard

ASC—Aeronautical Systems Center

ATOMS—Automated TO Management System

(Added-433AW) AW—Airlift Wing

CAF—Combat Air Forces

CAFTOP—Comprehensive Air Force Technical Order Plan

(Added-433AW) CC—Commander

COTS—Commercial Off-The Shelf

CTOM—Centralized Technical Order Management

DAPS—Defense Automated Printing Service

DOD—Department of Defense

DRU—Direct Reporting Unit

DSN—Defense Switched Network

EFB—Electronic Flight Bag

ETIMS—Enhanced Technical Information Management System

FAA—Federal Aviation Administration

FM—Flight Manual

FMESG—Flight Manuals Executive Steering Group

FMM—Flight Manual Manager

FMP—Flight Manual Program

(433AW) FMP—Flight Manuals Program

FMRC—Flight Manual Review Conference

FOA—Field Operating Agency

FTORB—Flight Technical Order Review Board

GPO—Government Printing Office

HAP—High Accident Potential

HATR—Hazardous Air Traffic Report

ID—Initial Distribution

IETM—Interactive Electronic Technical Manual

IPR—In Process Review

JCALs—Joint Computer-Aided Acquisition and Logistics Support (JCALs) System

LEP—List of Effective Pages

MAF—Mobility Air Forces

MAJCOM—Major Command

MDS—Mission Design Series

MFm—Modification Flight Manual

MFMPM—MAJCOM Flight Manual Program Manager

MIL SPEC—Military Specification

NATOPS—Naval Air Training and Operating Procedures Standard

NGB—National Guard Bureau

(Added-433AW) OG—Operations Group

(Added-433AW) OGV—Operations Group Standardization/Evaluation

OPR—Office of Primary Responsibility

(433AW) OPR—Office of Primary Responsibility

PC—Product Center

PCR—Publication Change Request

PM—Program Manager

QA—Quality Assurance

RDS—Records Disposition Schedule

(433AW) RDS—Records Disposition Schedule

SIB—Safety Investigation Board

SPD—System Program Director

(Added-433AW) Stan/Eval—Standardization/Evaluation

STINFO—Scientific and Technological Information

TCTO—Time Compliance Technical Order

TO—Technical Order

TODA—Technical Order Distribution Account

TOMA—Technical Order Management Agency

(Added-433AW) TX—Texas

UCI—Unclassified Controlled Information

TERMS AND CONDITIONS.

Automated TO Management System (ATOMS)—ATOMS is a web/PC-based relational database application designed to assist with maintaining TO Distribution Office (TODO) TO requirements and distribution records.

CAUTION—Is an operating procedure, technique, etc., which could result in damage to equipment if not carefully followed.

CoP (Air Force Knowledge Now)—Is a web-based, collaborative workspace where members use communication tools to conduct business, manage a project, keep abreast of important group issues and solve group problems. Because CoP data transfers through a secure "tunnel" between the server and the user's PC, they have proven a very useful way to post and distribute data. Many TO managers now use CoPs to augment the distribution of unclassified, restricted distribution data, whether technical or not, including preliminary, interim and formal TOs, TCTOs, engineering data and competition sensitive data.

Distribution Statement—A statement used in marking a technical document, regardless of publication media or form, to denote the extent of its availability for distribution, release, and disclosure without additional approvals and authorizations from the controlling DoD office (see AFI 61-204).

Electronic Flight Bag—is an electronic information management device that helps flight crews perform flight management tasks more easily and efficiently with less paper. It is a general purpose computing platform intended to reduce, or replace, paper-based reference material often found in the aircrew's carry-on Flight Bag, including the Flight Manual, AFIs, and Navigational Charts (including moving map for air and ground operations). In addition, the EFB can host purpose-built software applications to automate other functions normally conducted by hand, such as performance take-off calculations.

Electronic Technical Manual (ETM) (Type 1)—A manual containing technical data authored in a linear fashion for the purpose of page or in-line presentation (Type 1). ETMs may have a wide range of functionality ranging from indexed raster, hypertext linking, multimedia, interactivity between the data and the user, procedural guidance, navigational directions, and supplemental information. ETMs may also contain operational-support functions supplemental to procedures and are displayed according to TMSS specifications.

Enhanced Technical Information Management System, (ETIMS)—Enhanced Technical Information Management System (ETIMS) is intended to become the Air Force (AF) primary tool to support warfighters by providing focused, timely, accurate, and complete technical information in digital form at the point of use. When complete, ETIMS will allow personnel involved in all of the major business process areas of the Technical Order (TO) system (managing, acquiring, sustaining, distributing, storing, and using TOs) to carry out their responsibilities and access their required data using current Commercial Off-the-Shelf (COTS) technology.

Interactive Electronic Technical Manual (IETM): (Type 2)—An "information oriented", digital technical manual whose format and style are optimized for computer presentation. IETM organization facilitates easy user access to technical information while the display device provides interactive procedural guidance, navigational directions, and supplemental information. It is technical data authored in a non-linear fashion for the purpose of non-linear presentation. IETMS have the following characteristics: allow a high level of interactivity between the data and the user providing procedural guidance, navigational directions, and supplemental information; may provide assistance in carrying out operational-support functions supplemental to procedures. It is displayed in non-linear data form according to MIL-DTL-87268C.

IPDF/PDF—Indexed Portable Document Format (Adobe™).

Joint Computer-Aided Acquisition and Logistics Support (JCALS) System—The JCALS System is a joint service, distributed technical management information system.

Lead Command—The Air Force assigns responsibility for overall management of each system to a "lead command" to ensure that all requirements associated with every system receive comprehensive and equitable consideration. The lead command provides a primary input into the process of developing and maintaining a force structure with a balance of complementary capabilities, and it establishes a basis for rational allocation of scarce resources among competing requirements. When only one command uses a weapon or equipment system, it is automatically assigned Lead Command. See AFPD 10-9 for aircraft systems and AFI 10-901 for communication and information systems assignments. **NOTE:** Is an operating procedure, technique, etc., which is considered essential to emphasize.

Program Manager (PM)—As used in this instruction applies collectively to System Program Director, Product Group Manager, Supply Chain Manager or acquisition program manager. Formerly Single Manager (SM). The designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. The PM shall be accountable for credible cost, schedule, and performance reporting to the Milestone Decision Authority (MDA) in accordance with DoD 5000.1, *The Defense Acquisition System*.

Shall, Will, Should—In TOs the word “shall” is used to express a provision that is binding. The words “should” and “may” are used when it is necessary to express non-mandatory provisions. “Will” may be used to express a mandatory declaration of purpose or when it is necessary to express a future event.

STINFO—Scientific and Technological Information. Information relating to research, development, engineering, testing, evaluation, production, operation, use, and maintenance for military products, services, and equipment for military systems. This includes production, engineering, and logistics information.

System Program Director (SPD)—The individual in a SPO who is ultimately responsible and accountable for decisions and resources in overall program execution. SPD is the designated title for the program manager of a program that reports to a Program Executive Officer (PEO)/Product Center Commander during the acquisition phase, or an ALC/CC during system sustainment, and who presents the single face to the user while overseeing the seamless life-cycle processes.

Technical Content Manager (TCM)—The individual, usually an Equipment Specialist (see definition) or Engineer, responsible for maintaining the accuracy, adequacy, modification, classification, review and currency of the technical content of TOs and TCTOs supporting assigned systems, commodities or processes. TCMs are not generally responsible for style and format or other non-technical aspects of manuals.

Technical Data—Recorded information, regardless of form or method of recording, of a scientific or technical nature. Information that can be used, or adapted for use, to design, develop, assemble, engineer, produce, manufacture, modify, operate, repair, test, overhaul, maintain, or reproduce equipment and related technology.

Technical Manual (TM)—A document that contains operational or maintenance instructions, parts lists or parts breakdown, or other related technical information or procedures (exclusive of administrative procedures) for a weapon system, weapon system component, support equipment or other item procured by DoD. This data can be presented in any form (for example hard copy, audio and visual displays, magnetic tape, disks, or other electronic devices).

Technical Order (TO)—TMs developed to MIL SPECs or commercial manuals reviewed and approved in accordance with MIL-PRF-32216 "Evaluation of Commercial Off-The-Shelf (COTS) Manuals and Preparation of Supplemental Data, managed in the Air Force TO System, and meeting the criteria for TMs listed above. The term Technical Order is equivalent to the DoD term Technical Manual.

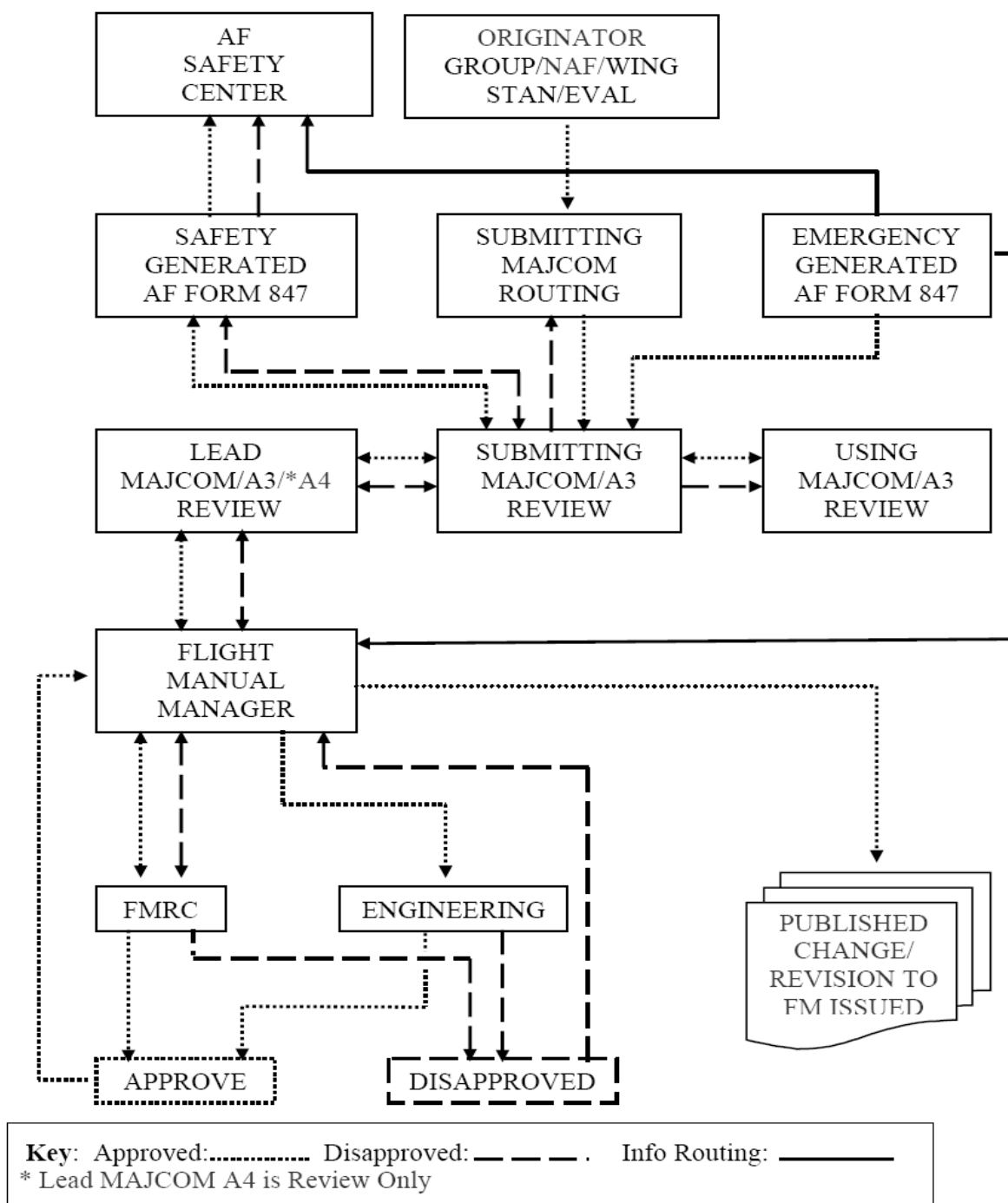
TO Manager—The TO Manager is responsible for managing some or all of the TOs for a specific military system or commodity program. Management responsibilities include acquisition, sustainment, format, publishing, storage and distribution of TOs and related

technical data IAW AFPD 21-3, AFI 21-303, and 00-5-series TOs. When acquisition is being performed at a product center, and sustainment will be managed at an ALC, the PM will ensure TO logistics supportability issues are coordinated with the candidate ALC TO Manager to assure compliance with applicable technical data guidance. During system sustainment, many of the below functions are performed by TCMs, Distribution Managers, and other support functions as delegated.

WARNING—Is an operating procedure, technique, etc., which could result in personal injury and/or loss of life if not carefully followed.

Attachment 2

RECOMMEND CHANGE ROUTING PROCESS



Attachment 3**INSTRUCTIONS FOR COMPLETING AF FORM 847**

- Block 1 Self-explanatory.
- Block 2 Control number of the submitting group or wing (i.e., 46OG2008-001). If there is no group or wing Stan/Eval function, then use the submitting organizational control number. For safety investigation generated AF Forms 847, annotate the AF Safety Automated System number.
- Block 3 Reserved for submitting MAJCOM control number.
- Block 4 Publication or technical order number.
- Block 5 Indicate if this is an Emergency or Safety Incident generated AF Form 847 (as defined in **Chapter 9**).
- Block 6 Full name of the publication or technical order, Distribution Type and Statement Code
- Block 7 Date of the basic publication or technical order.
- Block 8 Date of the latest change or revision.
- Block 9 Page number of the text or figure which the recommendation is based on.
- Block 10 The major or sub paragraph title or number or figure number of the recommended change.
- Block 11 If the recommendation is a checklist, annotate the item or step number within the checklist.
- Block 12 If the recommendation is an AFI, list the organizational OPR (located on the first page of the document).
- Block 13 Annotate this block if any supporting documents are attached. If supporting documents are attached they must be clearly legible and indicate what is incorrect or missing.
- Block 14 If the recommendation affects more than one series of aircraft in an MDS (i.e., it affects all F-16 aircraft), then mark the "YES" block. If it is unique to only one series (i.e., only the F-16C or C-130J), then mark "NO." If unsure, leave the block blank and either the lead MAJCOM or the FMM will determine applicability.
- Block 15 List the areas of text (or figure) where changes are proposed.
- Block 16 List what the text (or figure) should read.
- Block 17 Annotate "EMERGENCY RECOMMENDATION" if applicable, as the first entry. Fully explain and justify the rationale as to why the text or figure should be changed. The submitting individual must complete all the identification blocks at the bottom of the page.
- Block 18 List the name and rank of the originator.

- Block 19 Signature of originator.
- Block 20 List organization of originator.
- Block 21 List the DSN (or commercial) voice and FAX numbers of originator.
- Block 22 List the full mailing address of the originator.
- Block 23 List the e-mail address of originator.
-
- Reverse There are four levels (and sections) of review and coordination. Each level of review is allocated a Section on the backside of AF Form 847.
- Section 1: The first level is the submitting organization group/wing (or detachment) Stan/Eval function. Indicate whom the form will be forwarded to (i.e. NAF or MAJCOM). Annotate the appropriate level of concurrence. If you agree with the intent, but not the wording, then mark "CONCUR WITH INTENT" and annotate the recommended wording in the remarks section.
- Section 2: The second level of review is reserved for NAF. They comply with the same instruction as outlined above. If there is no NAF function then the second section is left blank.
- Section 3: The third level of review is reserved for MAJCOM use. MAJCOMs will assign their control number (i.e., AETC 01-130) in block 3 on the front side of the form. If the submitting MAJCOM is lead command, then they annotate their command in the "LEAD MAJCOM" block and forward copies to using commands of that MDS. If the submitting MAJCOM is not lead, they annotate who is lead and forward the original and information copies to the lead and using commands. Any AF Form 847 submitted by a using command and disapproved by the lead command will automatically be forwarded to the FMRC for final resolution. Lead MAJCOM forwards all coordinated AF Forms 847 to the FMM
- Section 4: The final level of review is reserved for the FMM or if the recommendation is for an instruction, the action officer responsible for the instruction. For flight manuals, if the using commands have concurred with the recommendation, the FMM will indicate "CONCUR" and hold the recommendation for incorporation into the next change (or revision). If the FMM determines the recommendation cannot be accepted in its present form but still has merit the FMM will indicate "CONCUR WITH INTENT" or "FORWARD TO _____ FOR REVIEW AND/OR ACTION" (Lead MAJCOM with recommended review and/or action) or hold the recommendation for the next FMRC. The FMRC will be the final resolution authority for disputed recommendations. If the recommendation requires additional review (i.e., engineering), the FMM will forward the form to the appropriate office and mark that block. The FMM (or final approval authority) must notify the submitting MAJCOM as to the final status and disposition of the recommendation within 30 days of receipt.

NOTES:

1. If an AF Form 847 is initiated at or above the wing/group level review and coordination

documentation will begin in Section for the next approving level. Blocks in unused lower levels will be left blank. An AF Form 847 originating from an intermediate level of review (i.e., the NAF level) will complete Section 2 and forward to the next level.

2. Recommendations submitted as emergency or as a result of a safety investigation will follow the procedures outlined in **Chapter 9**.

Attachment 4

FMP PUBLICATION CHANGE PRODUCTION SCHEDULE

Below is the schedule for developing and producing routine publication changes. The schedule for emergency or urgent changes, distributed by message, is detailed in **Chapter 9**. These schedules ensure FMP publications are updated in a timely and accurate manner.

Table A4.1. Schedule for Developing and Producing Routine Publication Changes.

Pre-Production Phase	Production Phase	Reproduction Phase	Initial Distribution (ID)
As Required	75 calendar days for change 105 calendar days for revision	45 Days	Date change or revision is mailed from printer or warehouse to the field or released electronically
Begins: - 60 days after FMM announces the update - 30 days after end of FMRC - Delivery of Preliminary Technical Order	1. Begins at end of Pre-Production Phase 2. FMM submits Publication Change Request (PCR) to TO manager or contractor. - This phase allows: - 60 days for editing (90 days for revision) - MAJCOM 7-day review - 10 days for prepublication review - 5 days for print package preparation	1. Begins at end of Production Phase 2. GPO/DAPS forwards the reproduction media to a printing contractor 3. Includes provisions for pre-ID quality inspection	1. Begins at end of Reproduction Phase 2. Includes acquisition of labels 3. Changes distributed to the field NLT than 120 calendar days after beginning of Production Phase 4. Revision distributed to the field NLT than 150 calendar days after beginning of Production Phase

NOTE: These times are for planning purposes only. Extension will be coordinated with lead and affected MAJCOM(s).